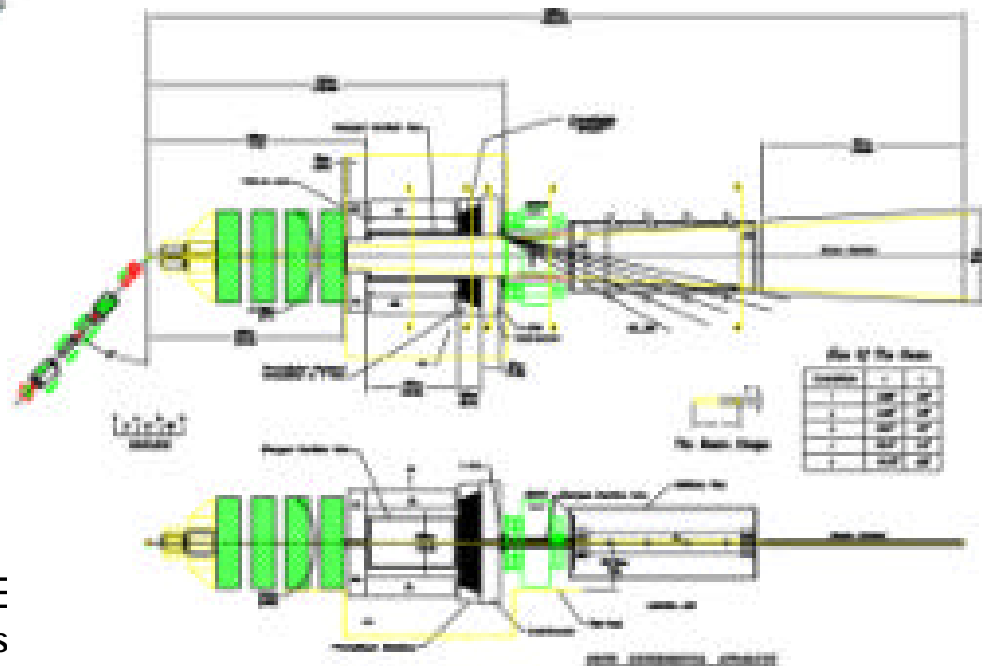


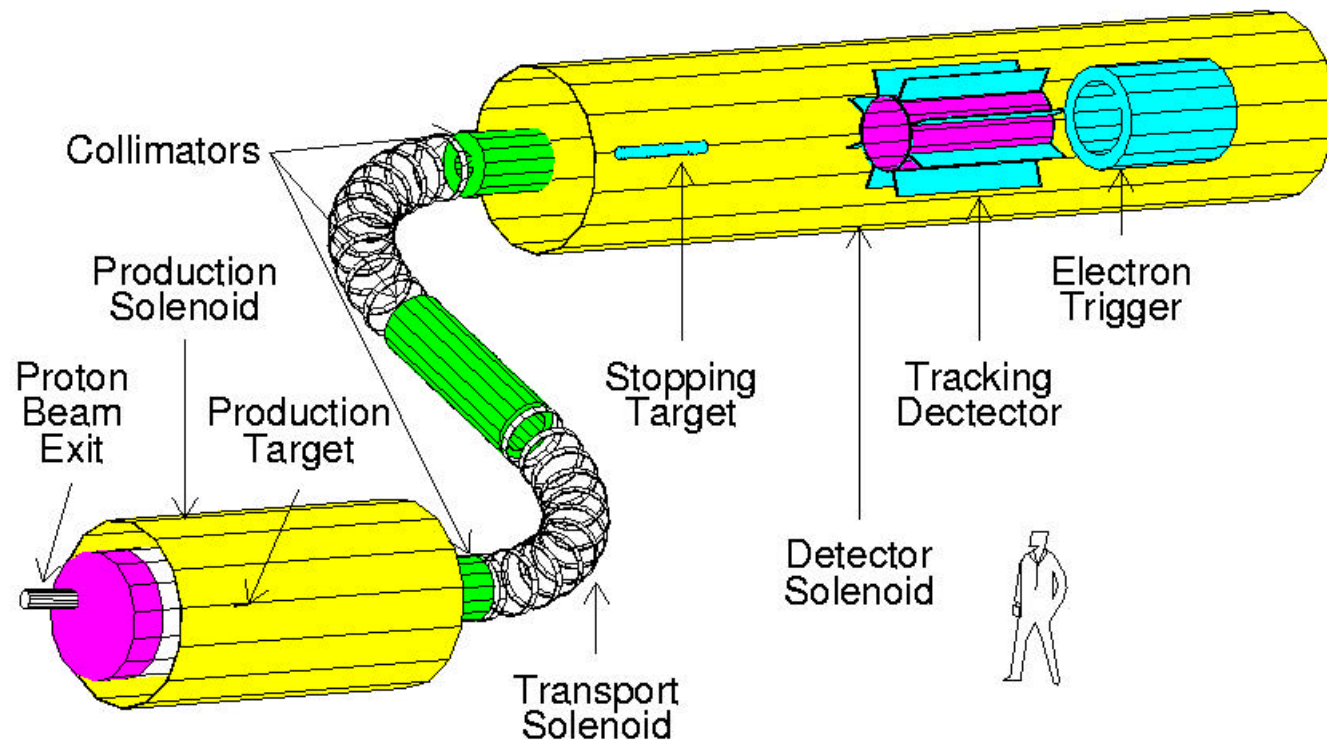
Status of RSVP (MECO + KOPIO)

- ? MECO (muon direct conversion) and KOPIO ($K^0 \rightarrow \pi^0 \pi^0 \pi^0$) approved at BNL
 - PAC invented '**must do**' category to emphasize importance of this physics in 1996
 - ALD-HENP granted **scientific approval** to E926 (10/96) and E940 (10/97)
 - DOE indicated, informally, that **capital costs were too high to succeed in DOE**
 - DOE agreed that BNL could seek other funding sources for MECO/KOPIO (NSF)
- ? Discussions with NSF evoked a mutual interest in pursuing an MRE grant
 - 'Rare Symmetry Violating Processes' (RSVP) Proposal submitted October 1999
 - the RSVP Proposal combined MECO and KOPIO in a single physics initiative
 - **NSF Wojcicki Panel** awarded RSVP experiments '**must do**' scientific status Nov '99
 - Sanders Panel criticized organization and planning bases in Dec 2000 Review
 - KOPIO/MECO improved performance; **PMs in place and R&D grants in progress**
- ? NSF pursued their internal MRE selection process
 - RSVP selected in FY00 by MPS directorate as one of 4 candidates for FY02 MREs
 - MPS MRE initiative included capital plus operations costs at \$137M, FY02-06
 - **NSF Science Board approved RSVP “..for funding in FY02 or later”** in Aug 2000
 - NSF did not submit RSVP to Congress in FY02 or FY03 (tight OMB budgetary limits)
 - RSVP is a **candidate to start in FY03** through incremental funding from Congress
 - stay tuned...



U.S. Department of E
Brookhaven Science As

MECO Detector



Neutrino White Paper and Letter of Intent to BNL

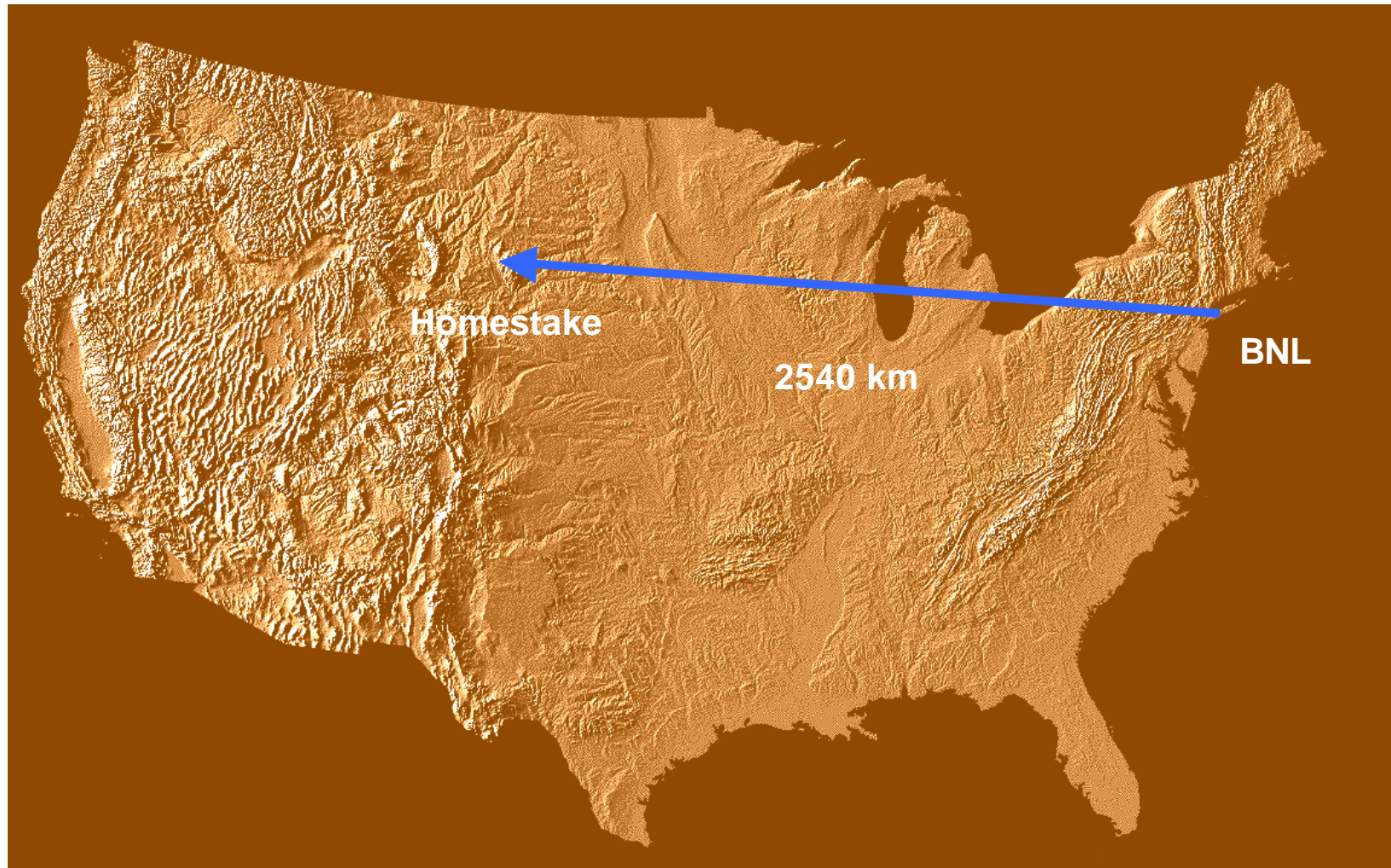
**Neutrino Oscillation Experiments for Precise Measurements of
Oscillation Parameters and Search for ν_τ ν_e Appearance and CP
Violation**

Submitted to BNL, April 2002

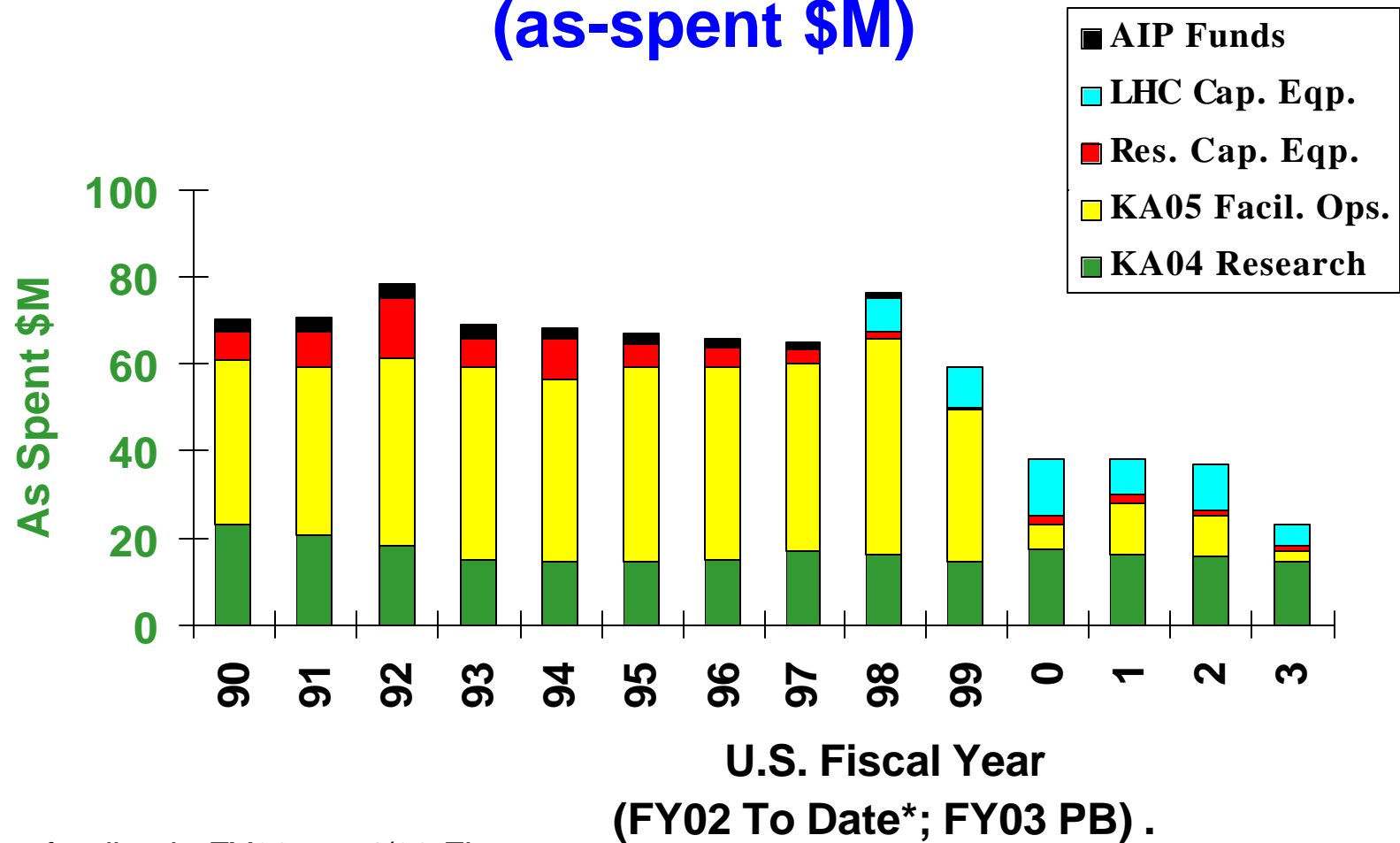
**BNL
University of Pennsylvania
South Dakota School of Mines and Technology
University of California, Los Angeles
ETH, Switzerland
University of Texas at Dallas
University of Hawaii
Universita di Napoli
Stony Brook University
Princeton University**

40 Authors

Potential BNL ? Homestake Neutrino Beam

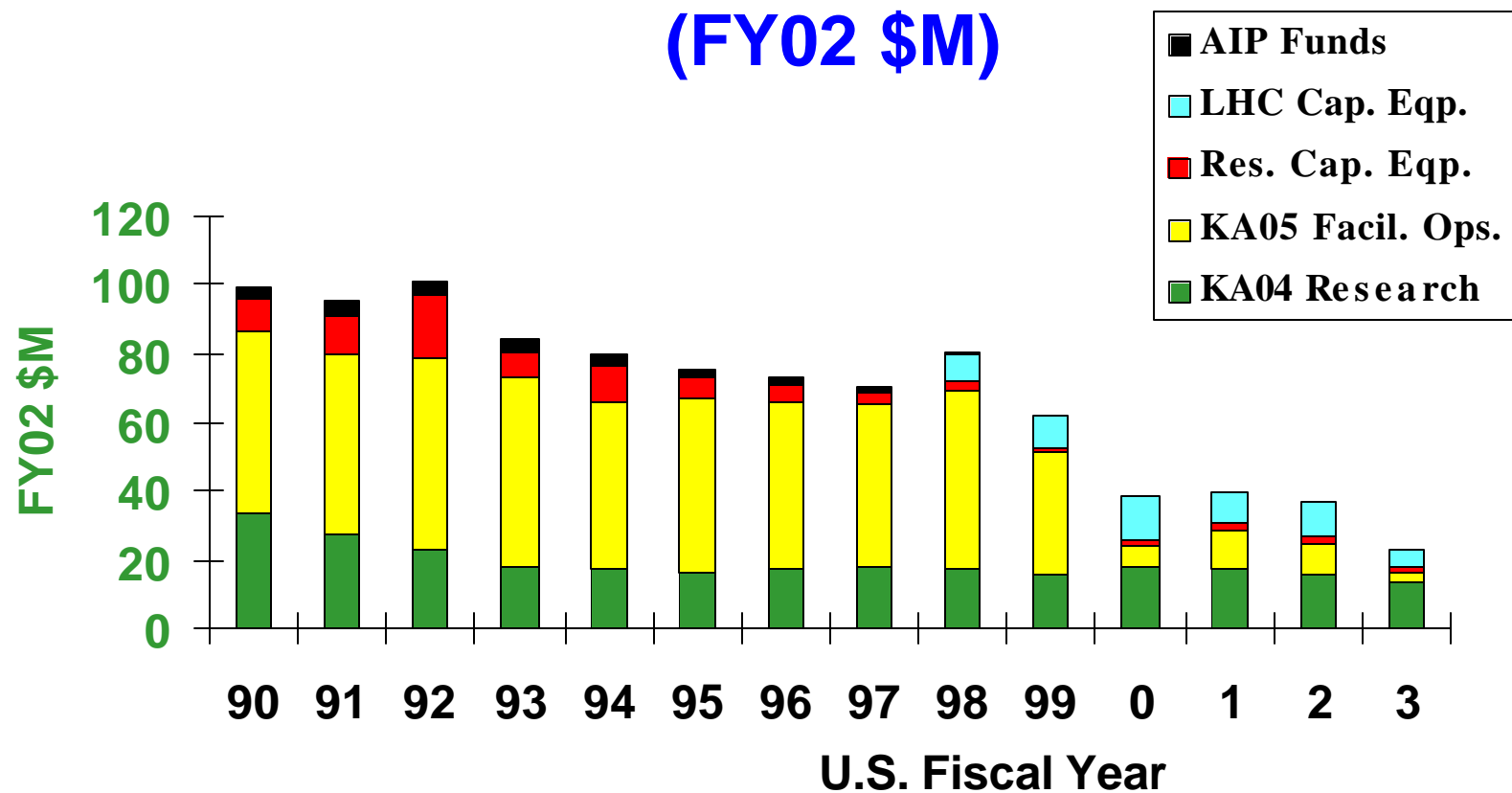


BNL HEP funding (as-spent \$M)



* reflects funding in FY02 per 4/02 Fin.

BNL HEP Funding (FY02 \$M)



* Reflects funding in FY02 per 4/02 Fin. Plan (FY02 To Date*; FY03 PB) .

HEP Budgets at BNL & Revised Request by B&R

Budget Category	FY99 Actual (\$M)	FY01 Actual (\$M)	FY02 ¹ Actual (\$M)	FY03P² P. Bud (\$M)	FY03R³ C. Rev (\$M)
KA 04 01 (Research)					
Phys Research	10.02	9.66	9.83	9.40	11.93
ATLAS Computing	0.51	0.89	0.68	0.68	1.74
ATLAS M&O	0.00	0.00	0.00	0.00	4.35
KA 04 03 011,012 (R&D Ops)	7.00	5.90	5.06	4.86	6.44
KA 05 (Facility Operations)					
AGS Facil. Ops.	2.79	5.98	5.83	0.00	8.70
AIP	0.00	0.00	0.00	0.00	0.00
Exp/Tech/Facil Cap Eqp	1.68	2.00	1.58	1.28	2.89
LHC Related Ops.	2.85	6.31	3.43	2.07	2.20
LHC Eqp.	13.11	8.21	10.27	5.03	6.04
Other KA (non-HEP)	0.70	-0.70	0.00	0.00	0.00
Total Funding	38.66	38.25	36.68	23.32	44.29
Total HEP	37.96	38.95	36.68	23.32	44.29
AGS Weeks (SEB/FEB)	0+15	10+12	10+0	0+0	9+16

¹ April 2002 DOE Fin. Plan

² FY 2003 President's Budget

³ BNL Contractor's Revised Request in FY04 Field Work Proposal

Research Budget Detail

Item	FY00 Actual (\$M)	FY01 Actual (\$M)	FY02 ¹ Actual (\$M)	FY03P² P. Bud (\$M)	FY02R³ C. Rev (\$M)
KA 04 01 Research					
Phys Research	10.02	9.66	9.83	9.40	11.93
ATLAS Computing	0.51	0.89	0.68	0.68	1.74
ATLAS M&O	0.00	0.00	0.00	0.00	4.35
KA 04 03 HE Technolgy R&D					
-011 HE Tech. R&D	3.29	2.92	2.57	2.95	3.84
-012 Muon Coll. R&D	2.64	1.97	1.55	0.96	1.53
-02 Facil. R&D	1.07	1.01	0.94	0.94	1.07
KA 04 03 Totals	<u>7.00</u>	<u>5.90</u>	<u>5.06</u>	<u>4.85</u>	<u>6.44</u>

TROUBLE!!

¹ April 2002 DOE Fin. Plan

² FY 2003 President's Budget

³ BNL Contractor's Revised Request in FY04 Field Work Proposal

BNL Impacts of FY 2003 President's Budget

- ? AGS will not run in FY03; E949 will not make the planned improvement in the measurement of $K^0 \rightarrow \pi^0 \pi^0$, as approved by DOE in August 1999**
- ? Opportunity for E962, Muon (g-2), to reduce their statistical error to the level of the systematic error by more running in FY03 will be eliminated**
- ? Plans to advance the ATLAS Computing and Research Program agendas with proposed plans will be severely impeded under FY03 DOE guidance**
- ? BNL's role in the Muon Collider/Storage Ring R&D program is to be cut in half relative to FY01 and is headed towards zero in future years**
- ? BNL scientific staff in the Physics Department will be reduced by 13 FTEs, (about 13%) in FY03 under the President's Budget; BNL will not be able to fulfill its approved HEP program commitments in the coming year**

BNL Impacts of FY03 President's Budget (Cont.)

- ? The proposed re-start of Superconducting Magnet R&D in the SMD remains zeroed-out in the FY03 President's Budget; needed and desirable R&D in this future investment area will not be funded at BNL**
- ? Opportunity for BNL to contribute to the Linear Collider Detector R&D efforts under the base program model will not be possible due to staff that has been released in the budget cuts noted above**

This is a NATIONAL PROBLEM!

- ? HEP has been held back in funding for the last decade; the effects are felt in all HEP areas but the universities and the supporting Labs have been hit especially hard
- ? As a result, support for only a few HEP experimental venues has been sustained (Tevatron, B-Factory and LHC Construction) while the remaining experimental venues are being squeezed out of the game
- ? At BNL, *AGS experiments* rated as '*Must Do*' and approved by DOE's HEP Division are being summarily stopped next year as part of the national squeeze on HEP; even the *LHC Research Program*, our central U.S. HEP program by the end of the decade, is being cut in half for the next 3 years
- ? **HEPAP needs to articulate this problem to the Administration and to the Congress in time for relief in FY 2003 – or face the demise of U.S. HEP**

What Can HEPAP Do?

- ? Articulate the value of a strong and diverse HEP research program as a vital part of the U.S. basic research portfolio
(we need to broaden our base on the experimental side with opportunities identified in the Subpanel's Long Range Planning Report)
- ? Engage the other national advisory committees to forward the agenda of the physical sciences in the national basic research program